



AnyPhone AnyWhere<sup>TM</sup>  
WIRELESS LOCATION TECHNOLOGY

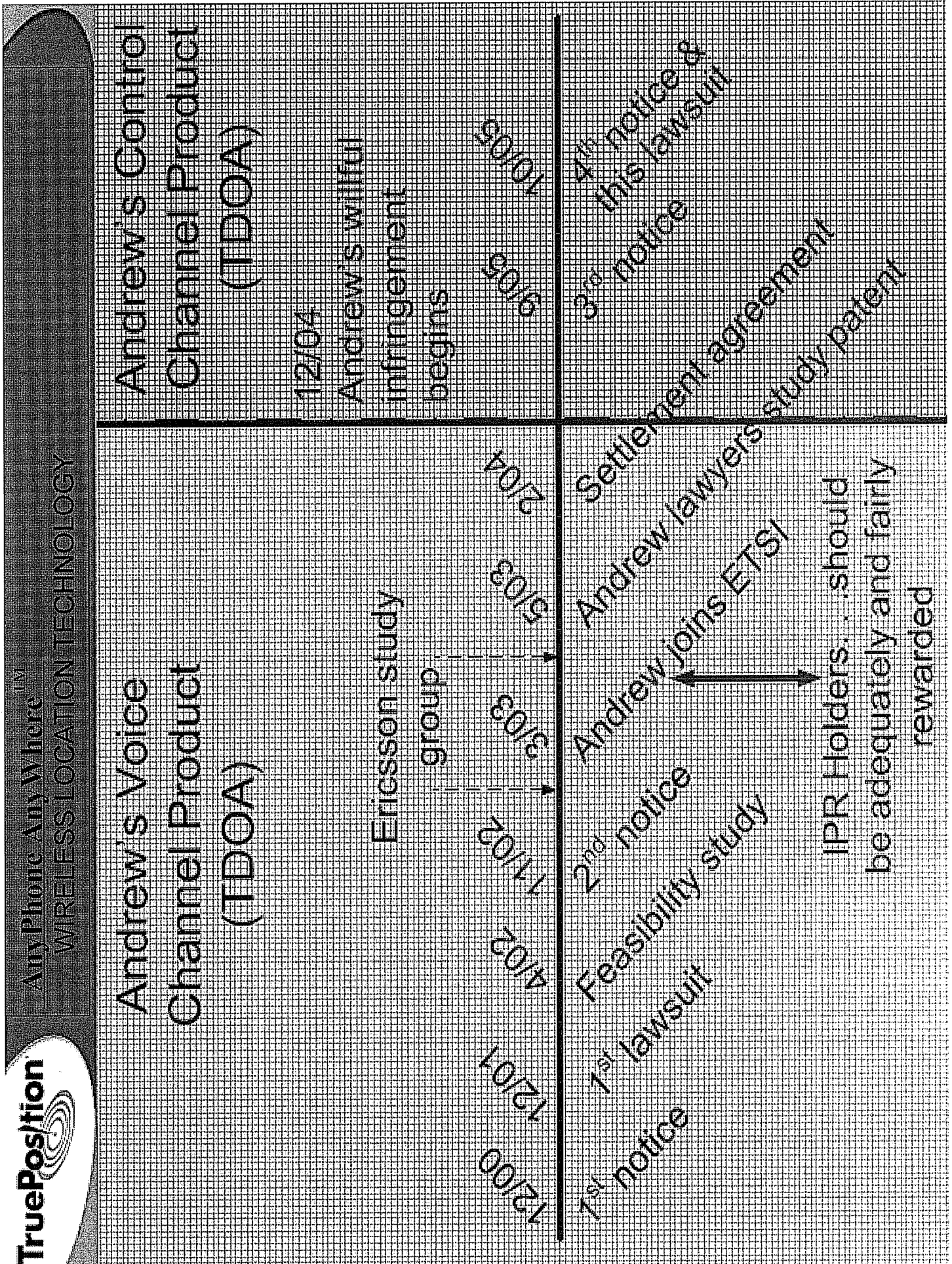
## TruePosition v. Andrew

# TruePosition's Motion for Enhanced Damages and Attorneys' Fees

and

# TruePosition's Motion for Permanent Injunctive Relief









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WIRELESS LOCATION TECHNOLOGY

December 29, 2000

DECEMBER 2000

1st NOTICE  
OF TRUEPOSITION'S  
PATENTS,  
INCLUDING 144

December 29, 2000

Dear Mr. Kennedy:

areas of TDOA, AOA, accuracy enhancement techniques, etc. We specifically would like to bring the following patents to your attention, as it appears that you may be in need of a license with respect to your Geometrix E911 Wireless Location System. We have

2. U.S. Patent No. 5,372,144, July 5, 1994, "Cellular Telephone Location System," relating to the use of time difference of arrival (TDOA) and the reverse control channel (RCC) to locate cell phones.

PTX-7





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DECEMBER 2000

**1st NOTICE  
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PATENTS,  
INCLUDING 144**

system employs TruePosition's patented TDOA and AOA processing methods and systems. If you would like to inquire about a license or need further information, please contact me directly.

We hereby notice that TruePosition, Inc. ("TruePosition") is the owner of a growing portfolio of patents relating to the use of angle of arrival (AOA) for locating mobile phones in the area of TDOA, AOA, and hybrid location systems. We specifically would like to bring the following patents to your attention, as it appears that you may be in need of a license with respect to your Government (GSA) Wireless Location System. We have attached copies for your reference:

1. U.S. Patent No. 4,718,949, March 1, 1983, "Direction Finding Location System," relating to the use of angle of arrival (AOA) for locating mobile phones.
2. U.S. Patent No. 5,371,104, 1994, "Cellular Receiver Location System," relating to the use of time of arrival (TOA) and signal strength (RSSI) to locate cell phones.
3. U.S. Patent No. 5,671,285, August 1, 2000, "Method for Improving the Accuracy of a Wireless Location System," relating to the use of TDOA in combination with cellular information (e.g., AOA information) for locating mobile phones.
4. U.S. Patent No. 6,148,515, August 22, 2000, "Improved Time Difference Location System," relating to the use of TDOA in combination with cellular information (e.g., AOA information) for locating mobile phones.

CONFIDENTIAL

PTX-7

AM10100555

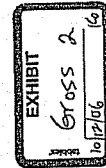


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# U-TDOA in GSM and GPRS Feasibility Study

CONFIDENTIAL - DISCUSSION AND DECISION

At GERAN #7 plenary 26-30 November, 2001 in Cancun, Mexico, TruePosition received approval to prepare a feasibility study examining U-TDOA location method in GPRS networks (GP-011997). A draft of the feasibility study was presented for comment at the G2 #8 his meeting in Kista, Sweden and his comments for consideration is the completed U-TDOA in GSM and GPRS Feasibility Study. Approval of this feasibility study will result in the creation of a Rel-6 work item. Release 6 timeframe is foreseen for completion of the required CRs.



PTX-364





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PERFORMANCE

Location System Description	TruePosition™
<ul style="list-style-type: none"> <li>After analysis, each cooperating LML reports the time of arrival information to the SMLC, which then calculates the MS location. Depending upon resource availability (RF and message transport capabilities), this process can be delayed to take many seconds (if necessary) and allowable without placing severe restrictions on the resource assignment and transport latency of the network infrastructure.</li> </ul>	
<b>3.3.3. Synchronization</b> All U-TDOA capable LMLs are synchronized to an externally derived and very accurate clock. Periodically (every few minutes) the LML's report to the SMLC the relationship between this system-wide clock and the GSM frame timing at the local site and/or surrounding sites. This information is maintained by the SMLC and used to optimize the estimation of a particular MS signal in the radio network as a reference LML. The reference LML is subsequently given the frequencies and system time at which to extract the relevant RP signal from the radio network to begin the location calculation process.	
<b>3.3.4. Location Determination Capacity</b>	

### 3.3.5. Intellectual Property Considerations

TruePosition, Incorporated may hold one or more patents or copyrights that cover information contained in this document. A license will be made available to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

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34





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NOVEMBER 2002

2nd NOTICE  
OF TRUEPOSITION'S  
PATENTS,  
INCLUDING 144

**From:**  
**Sent:**  
**To:**  
**Cc:**  
**Subject:**

Beckley, Fred  
Wednesday, November 06, 2002 1  
Patrick D. McPherson (E-mail); Lat  
Glenn J. Blumstein (E-mail)  
TruePosition Patents

\* 000747-33 - Method for Improving the Accuracy of a Wireless Location System (01/11/2000)  
\* N 011 178 - Pseudolite-augmented GPS for location services (08/08/2000)

Following our conversation yesterday, listed below are the patents that we anticipate the license would cover. As I mentioned, we would be happy to provide you with copies of any or all of these.

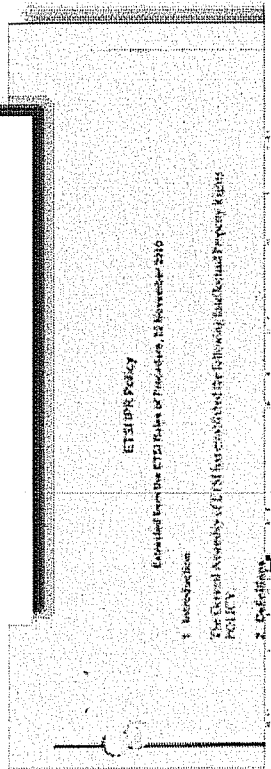
- 4,728,959 - Direction Finding Localization (3/1/1988)
- 5,327,144 - Cellular Telephone Location System (7/5/1994)
- 5,608,410 - System for locating a source of bursty transmissions cross reference to related applications (3/4/1997)
- 5,959,580 - Communications Localization System (9/28/1999)
- 6,047,192 - Robust Efficient Localization System (4/4/2000)
- 6,091,362 - Bandwidth Synthesis for Wireless Location System (7/18/2000)
- 6,097,336 - Method for Improving the Accuracy of a Wireless Location System (8/01/2000)
- 6,101,178 - Pseudolite-augmented GPS for locating wireless telephones (8/08/2000)
- 6,108,555 - Enhanced Time Difference Localization System (8/22/2000)
- 6,115,599 - Directed Retry Method for use in a Wireless Location System (9/05/2000)
- 6,119,013 - Enhanced Time Difference Localization System (9/12/2000)

PTX-8

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## ETSI IPR Policy



3.2 IPR holders whether members of ETSI and their AFFILIATES or third parties, should be adequately and fairly rewarded for the use of their IPRs in the implementation of STANDARDS and TECHNICAL SPECIFICATIONS.

